Amendments to the Specification

Please replace paragraph 0005 with the following rewritten paragraph:

[0005] During the process of intoxication, PA binds to its cell surface receptor, (e.g., anthrax receptor (ATR) and/or capillary morphogenesis gene 2 (CMG2)) and is cleaved at the sequence RKKR (residues 193-196 of SEQ ID NO:2) by cell surface proteases such as furin. This cleavage releases a 20 kilodalton fragment of the PA protein, leaving a 63 kilodalton fragment of the PA protein bound to the cell surface (PA63). Some cleavage to the PA63 form may be mediated by serum proteases and occur prior to PA, in this case PA63, binding to the cell surface. Release of the 20 kilodalton PA fragment enables the PA63 fragment to multimerize into a heptameric ring structure and exposes a site on PA63 to which LF and EF bind with high affinity. The complex is then internalized by receptor-mediated endocytosis. Acidification of the vesicle causes conformational changes in the pA63 heptamer that result in transportation of LF and EF toxins across the endosomal membrane, after which they are released into the cytosol where they exert their cytotoxic effects. The edema factor (EF) component of edema toxin (EF+PA) is a calmodulin dependent adenylate cyclase whose action upsets cellular water homeostasis mechanisms, thereby resulting in swelling of infected tissues. The lethal factor (LF) moiety of lethal toxin (LF+PA) is a zinc metalloproteinase that inactivates mitogen activated protein kinase kinase in vitro. Lethal factor induces a hyperinflammatory condition in macrophages resulting in the production of proinflammatory cytokines including TNF-alpha and interleukin-1beta, which are responsible for shock and death of anthrax patients. For more detailed reviews of *Bacillus Anthracis* infection and anthrax toxin please see, e.g., *Critical Reviews in Microbiology* (2001) 27:167-200, *Medical Progress (1999) 341:815-826, and Microbes and Infection* (1999) 2:131-139, each of which are hereby incorporated by reference in their entireties.

Please replace paragraph 0205 with the following rewritten paragraph:

[0205] The present invention also provides for antibodies (including molecules comprising, or alternatively consisting of, antibody fragments or variants thereof), that inhibit the cleavage of the PA83 into PA20 and PA63 by proteases such as trypsin or furin. See, e.g., Example 2 wherein an antibody that binds peptides that span the RKKR (residues 193-196 of SEQ ID NO:2) cleavage site of PA may be predictive of an

antibody's ability to inhibit the cleavage of PA by proteases. Alternatively, a PA cleavage assay is described in *J. Biol. Chem.* (1992), 267:16396-402, which is hereby incorporated by reference in its entirety. In one embodiment, an antibody that inhibits the cleavage of the PA83 into PA20 and PA63 comprises, or alternatively consists of a VH and/or a VL domain of at least one of the scFvs referred to in Table 1 or recombinant antibodies expressed by the cell lines referred to in Table 1, or a fragment or variant thereof. In a specific embodiment, an antibody that inhibits the cleavage of the PA83 into PA20 and PA63 comprises, or alternatively consists of a VH and a VL domain of any one of the scFvs referred to in Table 1 or recombinant antibodies expressed by the cell lines referred to in Table 1, or a fragment or variant thereof. Nucleic acid molecules encoding these antibodies are also encompassed by the invention.

Please replace paragraph 0347 with the following rewritten paragraph:

[0347] Theoretical considerations suggest that under ideal circumstances antibody concentration at half-maximal antigen binding (EC50) is a measure of affinity. In practical terms it can be used to rank the affinities of antibodies to quickly identify best binders. The lower the antibody concentration required for 50% of plateau binding, the higher is the affinity of the antibody for antigen. In the approach described below, a conventional ELISA is used to generate binding isotherms for PA antibodies in order to derive their EC-50 values. Additionally, antibodies may be tested for their ability to bind peptides that span the RKKR (residues 193-196 of SEQ ID NO:2) cleavage site in PA.